REMARKS

Claim 1 is rejected under 35 U.S.C 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 2, 4, 7 & 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuo et al. (US 6,448,101B1) in view of Rhodes (US 6,611,037B1).

Claims 3, 5 & 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuo et al. (US 6,448,101B1) in view of Rhodes (US 6,611,037B1) and Rhodes et al. (US 6,534,335B1).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuo et al. (US 6,448,101B1) in view of Rhodes (US 6,611,037B1) and Chen et al. (US 2003/0085415A1).

1. Objection to specification:

The title of the invention is objected because of being not descriptive.

To overcome this objection, the title of the invention has been amended in the above AMENDMENTS TO THE SPECIFICATION section as suggested by the Examiner. No new matter is introduced. Reconsideration of the amended specification is hereby requested.

2.Objection to claim 1:

Claim 1 is objected to because of informalities.

To overcome this objection, claim 1 has been corrected as specified in the above AMENDMENTS TO THE CLAIMS section, as per the Examiner's suggestions. No new matter is introduced. Reconsideration of the amended claim 1 is hereby requested.

3.Response to the rejection of claim 1 under 35 U.S.C. 112:

Claim 1 is rejected under 35 U.S.C. 112, for reasons of record that can be found on page 3 in the Office action identified above, which is part of paper no.4.

Response:

To overcome this rejection, a step of **forming a first mask layer** is added in the amended claim 1, support for which can be found in Fig.3 and paragraph [0018] of the specification as originally filed. No new matter has been introduced. Acceptance of the amended claim 1 is respectfully requested.

4.Rejection of claims 1, 2, 4, 7, and 10 under 35 U.S.C. 103(a):

Claims 1, 2, 4, 7, and 10 are rejected under 35 U.S.C. 103(a), for reasons of record that can be found on pages 3-5 in the Office action identified above, which is part of paper no.4.

Response:

As disclosed in the amended claim 1 and Figs.3-5 of the present application, **the method disclosed in the present application for forming a photo sensor comprises forming a plurality of first doped regions**

42 on the surface of the photo sensor **and forming a second doped region 46 partially overlapping with the first doped regions 42**. Additionally, the first doped regions 42 and the second doped region 46 are formed by using the same conductive type of dopants.

However, **the method disclosed by Kuo et al. for forming a photodiode 35 comprises forming a P-well 18 in the photo sensor region 12** (Fig.1, & col.2, lines 56-59), **and forming a N^+ doped area 30 in the P-well 18** (Fig.4, & col.3, lines 9-15). That is, **Kuo et al. only teach to form a N^+ doped area 30 in a P-well 18,** but Kuo et al. neither teach nor suggest forming a plurality of first doped regions and a second doped region partially overlapping with each of the first doped regions. It is therefore believed that the method disclosed in the present application should be different from Kuo et al.'s disclosure.

Additionally, **the method disclosed by Rhodes for forming a photosensor 324 comprises forming a pair of trenches 370a and 370b in a P-type well 311** (Fig.8, & col.8, lines 44-47), **and forming an N-type doped region 326 in the sides and bottom of each trench 370a, 370b** (Fig.10, col.9, lines 59-67, & col. 10, lines 20-22). That is, **Rhodes teaches to form an N-type doped region 326 in the sides and bottom of each trench 370a, 370b,** but Rhodes neither teaches nor suggests forming a plurality of first doped regions and a second doped region partially overlapping with each of the first doped regions. It is therefore believed that the method disclosed in the present application should be

different from Rhodes's disclosure.

Form the above discussion, since neither Guo et al. nor Rhodes suggests forming a plurality of first doped regions and a second doped region partially overlapping with each of the first doped regions as is disclosed in the present application, it is believed non-obvious to one of ordinary skill in the art at the time the invention was made to combine Guo et al. and Rhodes's disclosures to form the art disclosed in the amended claim 1. Reconsideration of the amended claim 1 is hereby requested.

As claims 2, 4, 7 and 10 are dependent upon the amended claim 1, they should be allowed if the amended claim 1 is allowed. Reconsideration of the claims 2,4, 7 and 10 is hereby requested.

5.Rejection of claims 3, 5, and 6 under 35 U.S.C. 103(a):

Claims 3, 5, and 6 are rejected under 35 U.S.C. 103(a), for reasons of record that can be found on pages 5-7 in the Office action identified above, which is part of paper no.4.

Response:

As claims 3, 5, and 6 are dependent upon the amended claim 1, they should be allowed if the amended claim 1 is allowed. Reconsideration of the claims 3, 5, and 6 is hereby requested.

6.R jection of claim 9 under 35 U.S.C. 103(a):

Claim 9 is rejected under 35 U.S.C. 103(a), for reasons of record that can be found on pages 7-8 in the Office action identified above, which is part of paper no.4.

Response:

As claim 9 is dependent upon the amended claim 1, it should be allowed if the amended claim 1 is allowed. Reconsideration of the claim 9 is hereby requested.

7.Allowance of claim 8:

Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response:

Claim 8 is dependent upon the amended claim 1 and should be allowed if the amended claim 1 is allowed. Reconsideration of the claim 8 is hereby requested.

Sincerely,

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